



Baking Buddy

2.009 Mockup Review

October 16, 2008

Silver B

Need



- Problem
 - Complexity of baking from scratch
- Customer
 - Home bakers
- Target price
 - \$150

Baking Buddy

Built-in Scale

Can measure
desired amounts

Multiple containers

Stores ingredients in
one place

Dispenser

Can dispense
and sift

Smart Controller Interface

Stores recipes
Controlling System



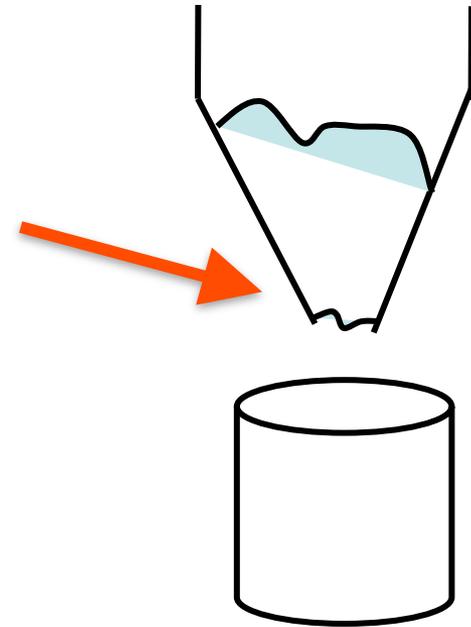
Major Risks

1. Dispensing mechanisms
2. Accurate measurement
3. Size and usability

Risk 1: Dispensing (1 of 4)



Free Fall



Risk 1: Dispensing (2 of 4)

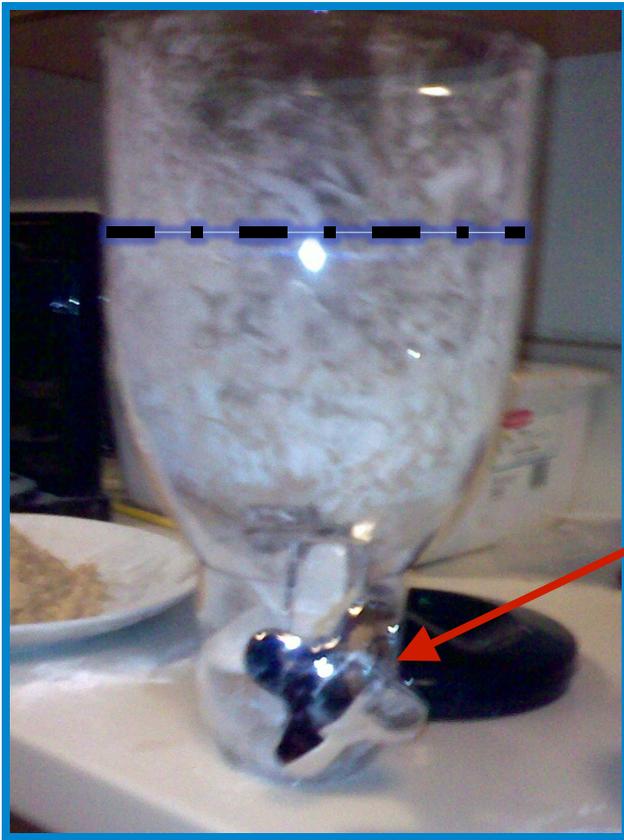
Auger



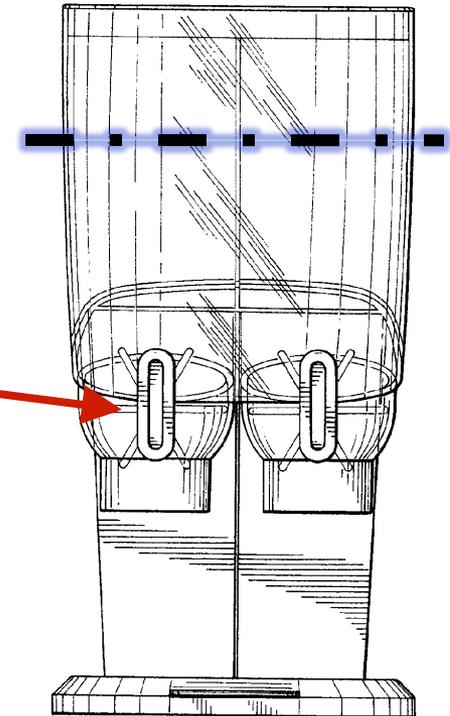
Auger

Risk 1: Dispensing (3 of 4)

Scooper



Scooper



Risk 1: Dispensing (4 of 4)



→ Three-layer Sifter *Sifter*

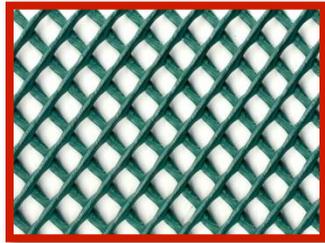
Rotating Wire Sifter ←

No Clogging

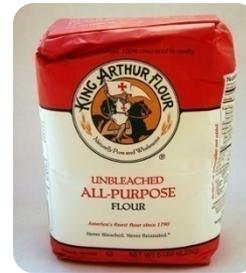
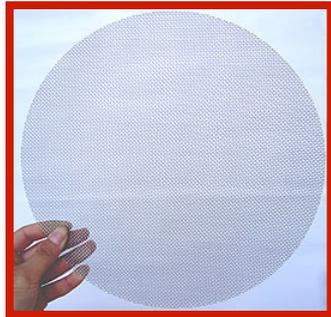


Solution: Varied Mesh Sizes

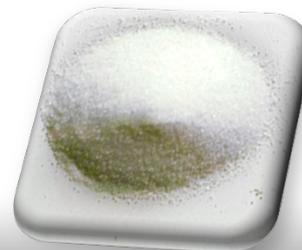
*Large
Opening
~0.86 mm*



*Medium
Opening
~0.15 mm*

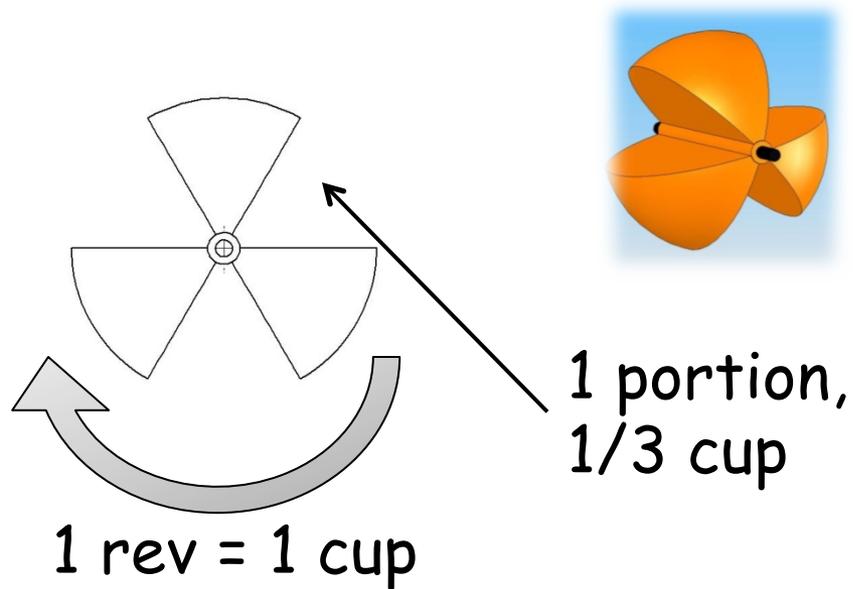


*Small
Opening
~0.06 mm*

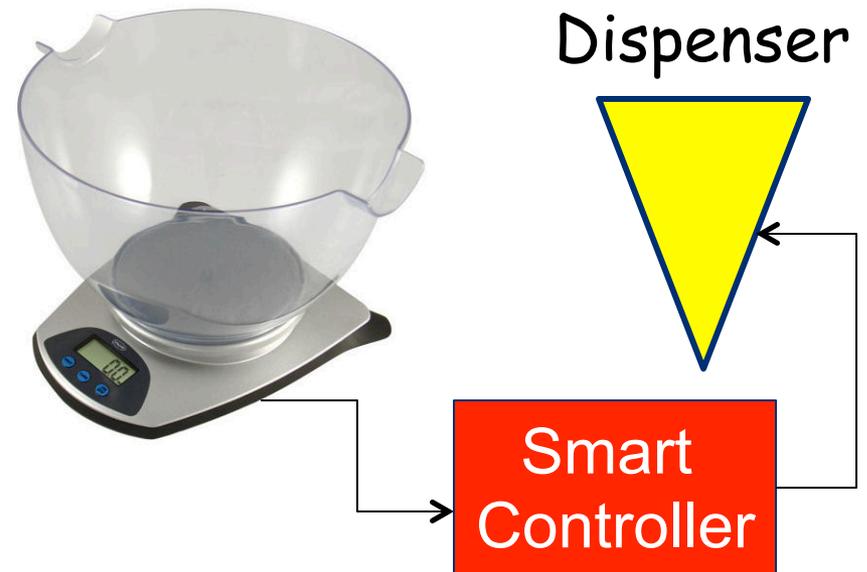


Risk 2: Accurate Measurement

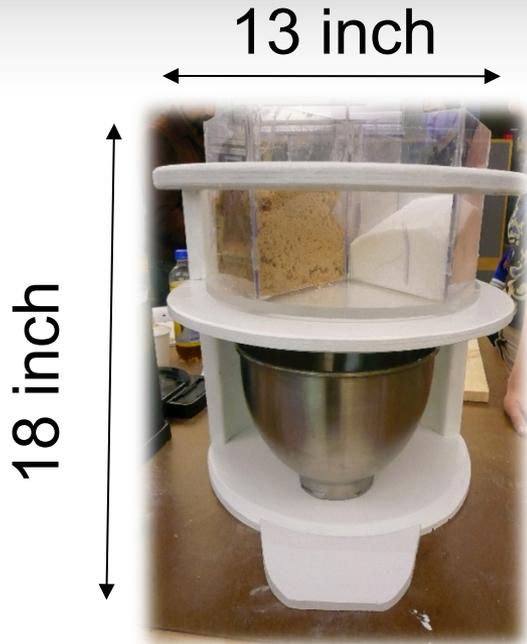
Constant volume



Electronic scale



Risk 3: Size & Usability



Weight = 8 lbs

Baking Buddy



Weight = 8 lbs

Coffee Maker

Unresolved Challenges

1. Dispensing small amounts

Next step: Adjusting size of sifter and container

2. Automatically controlling mechanisms and recipe storage

Next step: Integrating with smart controller

Product Contract

Customer need	Product (Attributes)	Suggested Engineering Specification
Reliable Dispensing	Dispensing capability	Dispense and sift 1 cup ingredient less than 30 sec.
Accurate measurement	Measuring precision	Has a scale that measures the weight up to 800 g ~ 8 cups
Suitable size	Dimensions	Radius of 7.5 inch and 18 inch height and be fitted on the countertop
Automatic & Recipe Storage	Memory Database/On-board CPU	
Store Ingredients	Volume	2 cups of each ingredient ₁₃ for one standard cake recipe

Contacts



Amy Smith , MIT senior lecturer



Massachusetts
Institute of
Technology